

Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of forwarding a data packet, said method comprising:
 - receiving the data packet, wherein the data packet includes a unicast destination address corresponding to a mobile node;
 - generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address; and
 - sending, via the broadcast address, the link-layer frame to a plurality of access devices, wherein at least one access device of the plurality of access devices supports the mobile node, and wherein the broadcast address is configured such that each of the plurality of access devices does not have to join the broadcast address in order to process the link-layer frame.
2. (Previously Presented) The method according to claim 1, wherein said broadcast address is predefined.
3. (Previously Presented) The method according to claim 1, further comprising:
 - determining that the at least one access device supports the mobile node; and
 - forwarding the link-layer frame to the mobile node.
4. (Previously Presented) The method according to claim 1, wherein said data packet is an IP data packet.
5. (Previously Presented) The method according to claim 1, wherein said broadcast address is a link-layer address.
6. (Previously Presented) The method according to claim 1, wherein said plurality of access devices store mappings between supported destination addresses and link-layer addresses corresponding to the supported destination addresses.
7. (Previously Presented) The method according to claim 1, wherein said unicast destination address is a network layer address.

8. (Previously Presented) The method according to claim 1, wherein the data packet further comprises a payload, and further wherein the payload is included in the link-layer frame.

9. (Previously Presented) The method according to claim 1, further comprising encapsulating said data packet into the link-layer frame.

10. (Previously Presented) The method according to claim 1, wherein said link-layer frame is discarded by an access device from the plurality of access devices if the access device does not support the mobile node.

11. (Withdrawn) An access device for forwarding a data packet, said access device comprising:

a receiving unit configured to receive a link-layer frame which is addressed to a multicast broadcast address, wherein the link-layer frame includes the multicast broadcast address and a unicast destination address of a mobile node;

a checking unit configured to check whether the mobile node corresponding to the unicast destination address is supported by said access device; and

a forwarding unit configured to forward said link-layer frame to the unicast destination address if the mobile node is supported by said access device.

12. (Withdrawn) The access device according to claim 11, further comprising a dropping unit configured to drop said link-layer frame if said checking unit determines that said mobile node is not supported.

13. (Withdrawn) The access device according to claim 11, wherein said unicast destination address is a network-layer address and said multicast broadcast address is a link-layer address.

14. (Withdrawn) The access device according to claim 11, wherein said access device comprises a cellular access point.

15. (Previously Presented) A routing device for forwarding a data packet, said routing device comprising:

a receiving unit configured to receive the data packet, wherein the data packet includes a unicast destination address corresponding to a mobile node;

a checking unit configured to determine whether a link-layer address corresponding to the mobile node is available;

an addressing unit configured to generate a link-layer frame if the link-layer address corresponding to the mobile node is not available, wherein the link-layer frame includes the unicast destination address and a broadcast address; and

a forwarding unit configured to forward, via the broadcast address, the link-layer frame to a plurality of access devices, wherein at least one access device of the plurality of access devices supports the mobile node, and wherein the broadcast address is configured such that each of the plurality of access devices does not have to join the broadcast address in order to process the link-layer frame.

16. (Cancelled).

17. (Previously Presented) An article of manufacture including a computer-readable medium having instructions stored thereon that, if executed by a computing device, cause the computing device to perform operations comprising:

receiving a data packet, wherein the data packet includes a unicast destination address corresponding to a mobile node;

generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address; and

sending, via the broadcast address, the link-layer frame to a plurality of access devices, wherein at least one access device of the plurality of access devices supports the mobile node, and wherein the broadcast address is configured such that each of the plurality of access devices does not have to join the broadcast address in order to process the link-layer frame.

18. (Previously Presented) The article of manufacture according to claim 17, wherein said broadcast address is predefined.

19. (Previously Presented) The article of manufacture according to claim 17, further comprising instructions for:

determining that the at least one access device supports the mobile node; and forwarding the link-layer frame to the mobile node.

20. (Previously Presented) The article of manufacture according to claim 17, wherein said data packet is an IP data packet.

21. (Previously Presented) The article of manufacture according to claim 17, wherein said broadcast address is a link-layer address.